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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,019	01/26/2001	Frank C. Hoppensteadt	9138-23	6361

7590 03/17/2006

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EXAMINER

HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
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2129

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,019

Applicant(s)

HOPPENSTEADT ET AL.

Examiner

Joseph P. Hirl

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to an Applicant's Letter of July 21, 2005, for the patent application 09/771,019 filed on January 26, 2001.
2. All prior office actions are fully incorporated into this Office Action by reference.

Status of Application Review

3. By prior actions of record, the application has been returned to the status of a First Action.

Status of Claims

4. Claims 1-35 are pending.

Product by Process Rejection

Rejection, 35 U.S.C. 102 or 103(a)

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kurokawa in view of Murphy (IEEE, The Stability of the Synchronization Learning of the Oscillatory Neural Networks, referred to as **Kurokawa**; IEEE, A Novel Learning Algorithm for Global Synchronization of Oscillatory Neural Networks, referred to as **Murphy**).

Kurokawa teaches oscillatory neural networks for information processing embodying control of phase or frequency of oscillatory neural networks with plastic weights incorporating positive feedback to achieve convergence and stability of the synchronized learning (**Kurokawa**, Abstract). Kurokawa does not teach a novel learning algorithm for global synchronization of oscillatory neural networks for pattern recognition. Murphy does teach a novel learning algorithm for global synchronization of oscillatory neural networks for pattern recognition (**Murphy**, Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to establish an array of locally connected neural oscillators with connections limited to the immediate neighborhood and through initialization and a novel learning rule, global synchronism can be achieved for temporal pattern segmentation or recognition (**Murphy**, Abstract).

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The teachings of Murphy achieve global synchronism without incurring any erroneous synchrony among uncorrelated objects (**Murphy**, Abstract).

Applicant teaches an oscillatory neural network computer that exhibits pattern recognition using phase relationships (specification, p 2:24-25).

The applicant has disclosed a product (oscillatory neural network) produced from a process of incorporating various weighted networks, phased-locked loop circuits, and supporting circuits. In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972) applies.

Response to Arguments

8. Related to the applicants letter of July 21, 2005, pages 1-4, all prior office actions stand as a matter of record. Applicant is invited to review a current copy of 37 CFR and particular section 1.72(b) and note that the limitation concerning the use of the abstract in reference to claim interpretation has been deleted.

Conclusion

9. Claims 1-35 are rejected.

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Correspondence Information

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (571) 272-3685. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anthony Knight can be reached at (571) 272-3687.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have any questions on access to Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read "J. P. Hirl P.E.", is written over the printed name.

Joseph P. Hirl

Primary Examiner

March 16, 2006